



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

JAN 20 2015

Ref: 8P-W-UIC

Alan Drake  
Kwik Stop Food Stores  
420 Royal Gorge Boulevard  
Canon City, Colorado 81212

RE: UNDERGROUND INJECTION CONTROL  
UIC Final Permit # CO50927-04914  
Kwik Stop System #1 – Septic System  
Receiving Carwash Waste Fluids  
Kwik Stop Carwash  
916 Highway 115  
Penrose, Colorado 81240

Dear Mr. Drake:

Enclosed is the Final Underground Injection Control Permit for the Kwik Stop Carwash in Penrose, Colorado. The public comment period ended November 29, 2014. There were no comments from the public or from you. Therefore, the Final Permit is effective upon the date of issuance.

If you have any questions on the permit, please call Craig Boomgaard at (800) 227-8917, extension 312-6794 or (303) 312-6794. Please send all future correspondence to the letterhead address, Attention: Craig Boomgaard, Mail Code: 8P-W-UIC

Sincerely,

*Callie Rathbone*  
for Callie A. Videtich  
Acting Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

Enclosures: Final Permit  
Statement of Basis



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**1595 WYNKOOP STREET  
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**UNDERGROUND INJECTION CONTROL PROGRAM**

**Class V Shallow System/Injection Well**

**Permit No. CO50927-04914**

Issued to:

**Kwik Stop Convenience Store and Carwash  
916 Highway 115  
Penrose, Colorado 81240**

Date Prepared: January 9, 2015

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#### APPENDIX A –

Table 1 Permit Limits and Approved Analytical Methods for Total Metals

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Figure 1 The Penrose Kwik Stop facility is approximately 35 miles southwest of Colorado Springs on Highway 115.

Figure 2 Class V shallow disposal system location. (Layout courtesy of Kwik Stop)

Figure 3 Area of Review Map

## II. SPECIFIC PERMIT CONDITIONS

### A. GENERAL

The EPA permit number the UIC Program Director has assigned to this permit is CO50927-04914. All correspondence should reference the site name and address and include the EPA permit number. The title "Director" as used in this permit refers to the UIC Program Director or the UIC Compliance Director.

1. Copies of all reports and notifications required by this permit for the purpose of any permitting action shall be signed and certified in accordance with the requirements under Part III, Section E.9 of this permit, and shall be submitted to the EPA at the following address. For the purposes of issuing permitting actions or authorization to commence injection, the person at the EPA having this authority is the UIC Program Director.

U.S. Environmental Protection Agency - Region 8  
UIC Program Director, Mailcode: 8P-W-UIC  
1595 Wynkoop Street  
Denver, CO 80202-1129.

2. Copies of all reports and notifications required by this permit the effective date of this permit shall be signed and certified in accordance with the requirements under Part III, Section E.9 of this permit, and shall be submitted to the EPA at the following address. For the purposes of assessing for compliance and initiating enforcement actions, the person at the EPA having this authority is the UIC Compliance Director.

U.S. Environmental Protection Agency – Region 8  
Director, UIC/FIFRA/OPA Technical Enforcement Programs<sup>1</sup>, Mailcode: 8ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202-1129.

### B. SHALLOW INJECTION WELL CONSTRUCTION

1. Construction Requirements. No owner or operator shall construct a Class V injection well in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may otherwise adversely affect the health of persons.

2. Proposed Changes. An alteration or addition shall be considered any work performed that affects the quantity or quality of the fluid being injected, or changes in the design of the injection system from the construction design diagrams in Appendix B of this permit. After approval by the Director, the permittee shall provide plans, as-built schematics, sketches, or other

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<sup>1</sup> The person holding this title is the UIC Compliance Director

4. Surfacing of Fluids. If, at any time, there is fluid on the top of the ground surface resulting from the shallow disposal system overflowing, this is considered a violation of the permit, and the disposal of fluid to the Class V shallow disposal system must cease immediately. The Director shall be notified within twenty-four (24) hours after the system first began to overflow.

5. Best Management Practices. The permittee shall operate the facility in such a way that best environmental management practices are followed. To reduce contamination in the waste water, all accidental spills will be absorbed with an absorbent material and disposed of as a solid waste per the requirements of the Resource Conservation and Recovery Act (RCRA). Sand water/ oil separators need to be thoroughly cleaned to function properly. Cleaning frequency varies depending on the amount of grease in the discharge. The permittee will inspect the sand water/ oil separators monthly and clean them as needed. To assure that only fluids are discharged into the Class V shallow disposal system, the secondary tank below the sand water/ oil separators will be pumped out as needed or at least once per year. Maintenance records shall be kept on site. These best management practices will significantly reduce the amount of contaminants migrating into the ground water.

#### E. SAMPLING, REPORTING OF RESULTS, AND NOTIFICATION REQUIREMENTS

1. Shallow Injection Well Sampling Program. The permit requires that the first samples be collected from the septic tank within 30 days of the effective date of the permit. Waste fluid samples shall be collected by the permittee, or his representative, semi-annually at six [6] month intervals, from the last accessible containment prior to entering the leachfield. Such sampling techniques shall be utilized so that the fluid sample is representative of the injectate released to the subsurface, and so the sample can be analyzed with EPA approved drinking water or equivalent methods. The analyzing laboratory shall utilize Appendix A, Table 1 (or other methods that have been approved by the Director) to make determinations of Total Metals. The analyzing laboratory shall utilize Appendix A, Table 2 to make determinations of Volatile Organic Compounds (VOCs).

The permittee shall notify the Director in advance of any modifications in procedures that might result in changes in chemical components of the fluid waste stream. After reviewing the proposed changes, the Director may add additional monitoring requirements as deemed necessary for the protection of underground sources of drinking water.

Whenever there is a change in the composition of injection fluids, another fluid sample shall be collected within thirty (30) days and analytical results shall be submitted to the Director no later than one (1) week after the permittee receives the analytical results from the laboratory.

2. Sampling Information. Records of any monitoring activity required under this permit shall include:

- (a) The date, exact place, and the time of fluid sampling;

- (a) All data required to complete the Permit Application for this permit for a period of at least three (3) years after the Permit Application was submitted.
- (b) Copies of all reports required by this permit for at least three (3) years after the reports were submitted.
- (c) Records regarding the nature and composition of all injected fluids. The permittee shall continue to retain these records for a period of three (3) years after the closure of the injection well system unless the records are delivered to the Director or written approval to discard the records is obtained from the Director. This period may be extended by request of the Director at any time.
- (d) Records of monitoring information as specified under Part II, Section E.2.

## G. PLUGGING AND ABANDONMENT

1. Plugging and Abandonment Requirements. The method for plugging and abandonment of any shallow injection well shall not allow the movement of a fluid containing any contaminant into any underground source of drinking water (USDW), if the presence of that contaminant may cause a violation of the primary drinking water standards under 40 CFR Part 141, other health-based standards, or may otherwise adversely affect the health of persons.

2. Notice of Plugging and Abandonment. The permittee shall notify the Director in writing and provide a Plugging and Abandonment Plan at least thirty (30) calendar days before plugging and abandonment of either the existing dry well or the proposed dry well. The Plugging and Abandonment Plan must meet the requirements found in G.1 above.

3. Plugging and Abandonment Plan Approval. The permittee shall plug and abandon the well as provided in the Plugging and Abandonment Plan. The Plugging and Abandonment method must be approved by EPA prior to the plugging and abandonment of the shallow injection well. EPA reserves the right to change the manner in which the shallow injection well will be plugged and abandoned if it is deemed that the designated closure method is not protective of any USDW.

4. Cessation of Injection Activity. After a cessation of injection for two (2) years, the permittee shall plug and abandon the well in accordance with the Plugging and Abandonment Plan unless the permittee:

- (d) provides notice to the Director; and
- (e) demonstrates that the well will be used in the future; and
- (f) describes actions or procedures satisfactory to the Director that will be taken to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment.

5. Plugging and Abandonment Report. Within sixty (60) calendar days after plugging the well, the permittee shall submit a narrative report to the Director. The person who performed the plugging operation shall certify per the requirements found in Part III, Section E.9 (d) that the report is accurate. The report shall consist of either: (1) a statement that the well was

### C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be thereby affected.

### D. CONFIDENTIALITY

In accordance with 40 CFR, Part 2 and 40 CFR, Section 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim shall be asserted at the time of submission by stamping the words "**Confidential Business Information**" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim shall be assessed in accordance with the procedures in 40 CFR, Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the permittee; and
- Information about the existence, absence, or level of contaminants in drinking water.

### E. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for: termination, revocation and reissuance, modification of this permit, and/or formal enforcement action. Such noncompliance may also be grounds for enforcement action under other statutes.

#### 2. Continuation of Expiring Permit.

- (a) Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least one hundred and eighty (180) days before this permit expires.
- (b) Permit Extensions. The conditions of an expired permit may continue in force in accordance with 5 U.S.C. 558(c) until the effective date of a new permit, if:
  - (i). The permittee has submitted a timely application that is a complete application for a new permit; and
  - (ii). The Director, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit.

upon request copies of records required to be kept by this permit.

8. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the condition of this permit;
- (b) Have access to and copy, at reasonable times, records that must be kept under conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

9. Signatory Requirements. All reports or other information requested by the Director shall be signed and certified as follows.

- (a) All reports required by this permit and other information requested by the Director shall be signed as follows:
  - (i). for a corporation—by a responsible corporate officer, such as a president, secretary treasurer, or vice president of the corporation in charge of principal business function, or any other person who performs similar policy or decision-making functions for the corporation;
  - (ii). for partnership or sole proprietorship—by general partner or the proprietor, respectively;
  - (iii). or for municipality, state, federal, or other public agency—by either a principal executive or a ranking elected official.
- (b) A duly authorized representative of the official designated in paragraph (a) above also may sign only if:
  - (i). the authorization is made in writing by a person described in paragraph (a) above;
  - (ii). the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and
  - (iii). the written authorization is submitted to the Director.
- (c) If an authorization under paragraph (b) of this section is no longer accurate



- (ii). Written notice of any noncompliance that may endanger health or the environment **shall be provided to the Director within five (5) calendar days** of the time the permittee becomes aware of the noncompliance. The written notice shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to prevent or reduce recurrence of the noncompliance.
- (d) Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time of analysis submission. The reports shall contain the information listed in Part III, E.10(c)(i) of this permit.
- (e) Other Information. When the permittee becomes aware that any relevant facts were not submitted in the permit application, or incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such correct facts or information within fourteen (14) calendar days of the time such information becomes known.

11. Oil Spill and Chemical Release Reporting. The operator shall comply with all other reporting requirements related to oil spills and chemical releases or other potential impacts to human health or the environment by contacting the National Response Center (NRC) at 1.800.424.8802 or 202.267.2675, or through the NRC website at <http://www.nrc.uscg.mil/index.htm>.

**Table 1: Total Metals with Permit Limits and Approved Analytical Methods**

Parameter Name	Analytical Methods	Permit Limit (mg/L)	Standard Type*
Antimony	200.8, 200.9	0.006	MCL
Arsenic	200.7, 200.8, 200.9	0.01	MCL
Barium	200.7, 200.8	2.0	MCL
Beryllium	200.7, 200.8, 200.9	0.004	MCL
Boron	200.7, 212.3	1.4	HA-Lifetime
Cadmium	200.7, 200.8, 200.9	0.005	MCL
Chromium(total)	200.7, 200.8, 200.9	0.1	MCL
Copper	200.7, 200.8, 200.9	1.3	MCL-TT
Iron	200.7, 200.9	5.0	Region 8 Permit Limit
Lead	200.8, 200.9	0.015	MCL-TT
Manganese	200.7, 200.8, 200.9	0.8	Region 8 Permit Limit
Mercury (inorganic)	245.1, 245.2, 200.8	0.002	MCL
Molybdenum	200.7, 246.1, 246.2	0.04	HA-Lifetime
Nickel	200.7, 200.8, 200.9	0.1	HA-Lifetime
Selenium	200.8, 200.9	0.05	MCL
Silver	200.7, 200.8, 200.9	0.1	HA-Lifetime
Strontium	272.1, 272.2, 200.7	4.0	HA-Lifetime
Thallium	200.8, 200.9	0.002	MCL
Zinc	200.7, 200.8	2.0	HA-Lifetime

**Table 2: Volatile Organic Compounds with Permit Limits**

Parameter Name	CAS No	Permit Limit (mg/L)	Standard Type*
1,1,1,2-Tetrachloroethane	630-20-6	0.07	HA-Lifetime
1,1,1-Trichloroethane	71-55-6	0.2	MCL
1,1,2,2-Tetrachloroethane	79-34-5	0.0003	HA-Lifetime
1,1,2-Trichloroethane	79-00-5	0.005	MCL
1,1-Dichloroethylene	75-35-4	0.007	MCL
1,2-(cis)Dichloroethylene	156-59-2	0.07	MCL
1,2-(trans)Dichloroethylene	156-60-5	0.1	MCL
1,2,3-Trichloropropane	96-18-4	0.04	HA-Lifetime
1,2,4-Trichlorobenzene	120-82-1	0.07	MCL
1,2-Dibromomethane (Ethylene Dibromide [EDB])	106-93-4	0.00005	MCL
1,2-Dichlorobenzene o-	95-50-1	0.6	MCL
1,2-Dichloroethane	107-06-2	0.005	MCL

* explanation of Standard Type
<b>HA:</b> Health Advisory. An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist federal, state, and local officials.
<b>HA-Lifetime:</b> The concentration of a chemical in drinking water that is not expected to cause any adverse, noncarcinogenic effects for a lifetime of exposure. The Lifetime HA is based on exposure of a 70-kg adult consuming 2-liters of water per day. The Lifetime HA for Group C carcinogens includes an adjustment for possible carcinogenicity.
<b>HA-DWEL:</b> Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects that assumes all of the exposure to a contaminant is from drinking water.
<b>HA-Ten Day:</b> The concentration of a chemical in drinking water that is not expected to cause any adverse, noncarcinogenic effects for up to ten days of exposure for a 10- kg child consuming 1-liter per day.
<b>MCL:</b> Maximum Contaminant Level. The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available analytical and treatment technologies and taking cost into consideration. MCLs are enforceable standards.
<b>MCLG:</b> Maximum Contaminant Level Goal. A non-enforceable, health goal that is set at a level at which no-known or anticipated-adverse effect on the health of persons occurs and that allows an adequate margin of safety.
<b>Region 8 Permit Limit:</b> Permit limit calculated by Region 8 Drinking Water Toxicologist based on human-health criteria.
<b>RfD:</b> Reference Dose. An estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.
<b>SDWR:</b> Secondary Drinking Water Regulations. Nonenforceable Federal guidelines regarding cosmetic effects (such as tooth or skin discoloration), or aesthetic effects (such as taste, odor, or color) of drinking water.
<b>TT:</b> Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.
<b>10-4 Cancer Risk:</b> The concentration of a chemical in drinking water corresponding to an excess estimated lifetime cancer risk of 1 in 10,000.

**Figure 1:** The Penrose Kwik Stop facility is approximately 35 miles southwest of Colorado Springs on Highway 115. (Google Earth 2012)

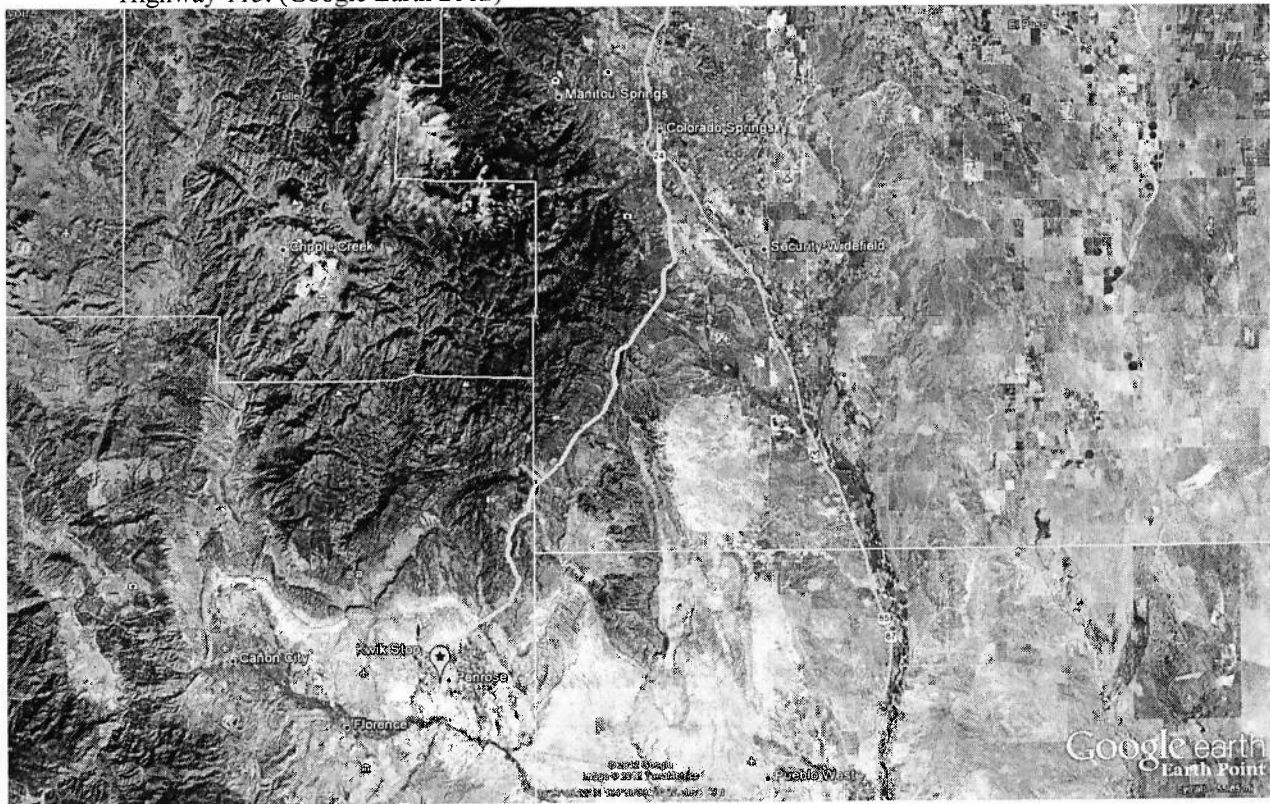
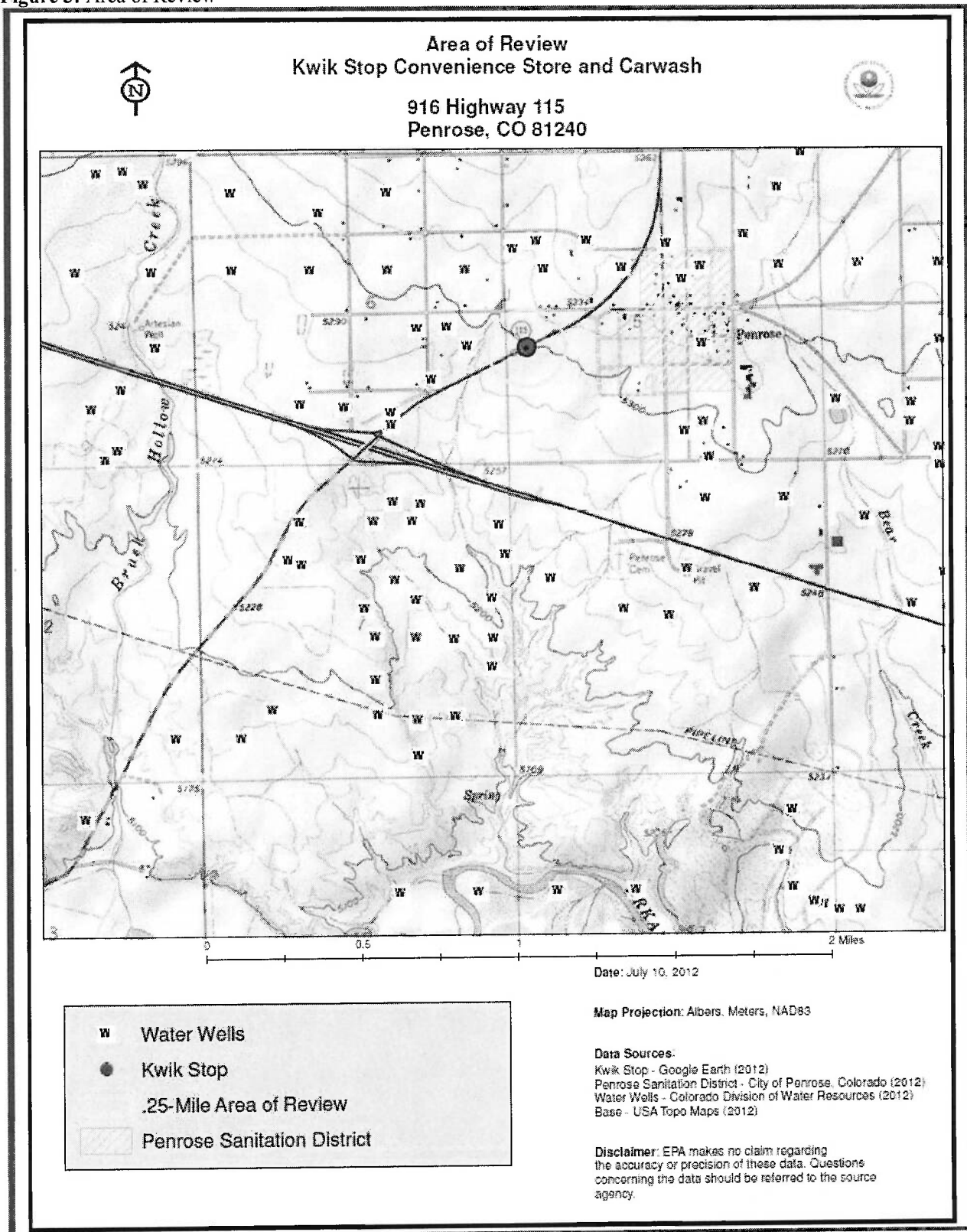


Figure 3: Area of Review





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8  
1595 Wynkoop Street  
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**STATEMENT OF BASIS  
FOR  
UNDERGROUND INJECTION CONTROL  
CLASS V PERMIT  
PERMT NUMBER: CO50927-04914**

**Kwik Stop Convenience Store and Carwash**  
916 Highway 115  
Penrose, Colorado 81240

**CONTACT:** Craig Boomgaard  
U. S. Environmental Protection Agency  
Region 8, 8P-W-UIC  
1595 Wynkoop Street  
Denver, Colorado 80202-1129

Telephone: (800) 227-8917, extension 312-6794

**I. DESCRIPTION OF FACILITY AND BACKGROUND INFORMATION**

On September 24, 2001, the Environmental Protection Agency Region 8 received an application for a Class V Underground Injection Control (UIC) permit submitted by Kwik Stop Food Stores owner, David McCallister. The original application proposed the injection of car wash fluids at an average volume of 7,500 gallons per day and a maximum of 12,600 gallons per day. A permit was drafted at the time, but not finalized. On January 12, 2011, EPA wrote the operator and requested that they update their permit application, complete a Shallow Waste Disposal System Inventory Request, and provide current analytical results for fluid samples collected from the carwash disposal system. Kwik Stop Director of Operations, Alan Drake, complied with the EPA's request on March 9, 2011. The facility was inspected by the EPA on September 3, 2010, and October 24, 2011. The inspection reports recommended that a permit be issued. A permit, if issued, would authorize the discharge of carwash waste fluids into a Class V shallow disposal system/injection well located at 916 Highway 115, Penrose, Colorado.

The Penrose Kwik Stop facility, as shown in Figure 1 of the Appendix, is approximately 35 miles southwest of Colorado Springs on Highway 115. The facility is comprised of a six-bay carwash station with a restroom and a recreational vehicle dump station associated with it, a



convenience store, an office and warehouse building, and two fueling stations, as shown in Figure 2 of the Appendix.

The carwash is equipped with two automatic wash bays and four manual wash bays and can accommodate large trucks. The carwash has a restroom for the station attendant and a recreational vehicle dump site. The convenience store has a restroom and a floor sink. The office and warehouse share a restroom. There are no systems within the property boundary that collect or discharge storm water or surface runoff.

The carwash currently generates an average volume of wash waste water of 300 gallons per day, and a maximum volume of 3,000 gallons per day. Because this system treats industrial waste from a business establishment, injects the effluent into the subsurface, which action has the potential to cause a violation of primary drinking water regulations under Title 40 of the Code of Federal Regulations Part 142, it will require a permit and be referred to as ***Kwik Stop System #1***.

According to a separate inventory request form submitted by Kwik Stop on March 9, 2011, the restroom and recreational vehicle dump station associated with the carwash generate an average volume of waste water of 10 gallons per day, and a maximum volume of 100 gallons per day. Both empty into a 750 gallon septic system that has its own drainfield. Because this system treats sanitary waste from a business establishment and injects the effluent into the subsurface, under Title 40 of the Code of Federal Regulations Part 144.24, it will be authorized by rule in a separate document and referred to as ***Kwik Stop System #2***.

Also, according to the EPA inventory request form submitted by Kwik Stop on August 19, 2011, the convenience store generates an average volume of waste water of 2,130 gallons per day. The waste water is comprised of dishwater, floor wash water and bathroom waste. These wastes are treated by a large capacity septic system installed in February 1998. The office and the warehouse generate bathroom waste that is treated by a small capacity septic system. Both septic systems drain to the same leach field. Because these systems together treat non-residential waste greater than 2,000 gallons and generated by more than 20 people per day, under Title 40 of the Code of Federal Regulations Part 144.24, they will be authorized by rule in a separate document and referred to as ***Kwik Stop System #3***.

This Statement of Basis addresses ***Kwik Stop System #1***. In this system, the carwash station, wash water from each of the six wash bays enters a floor drain in the bay and is channeled to and passes through four sand water/ oil separators. After filtering through the separators, the waste water flows to two 4,000-gallon capacity holding tanks designed to act as settling tanks for suspended solids. The waste water is dispersed into an 80-foot by 80-foot drain field on the east side of the facility. The drain field consists of heavy-wall, PVC, perforated piping laid on 6-foot centers through which the waste fluids are injected into the ground. Two observation wells allow the drain field to be monitored. The drain system and tanks are inspected two times per year. The tanks are pumped one time per year.

Construction of the carwash was completed in 2001. According to Nolte Engineering firm, 1975 Research Parkway, Colorado Springs, Colorado 80920, system designer and installer, construction and installation were in compliance with applicable OSHA rules and regulations,

and conformed to Colorado Department of Public Health and Environment regulations and Fremont County Environmental Health's individual sewage disposal system regulations. The layout of the disposal system is shown in Figure 3 of the Appendix. Components of the system are shown in Figure 4 of the Appendix.

Kwik Stop Food Stores director of operations, Alan Drake, understands that the Class V shallow disposal system, Kwik Stop System #1, needs to be permitted. He has submitted all the required information and data necessary for permit issuance in accordance with Title 40 of the Code of Federal Regulations, Parts 144, 146 and 147. A Draft Permit has been prepared. Public Notice of the Draft Permit will be published in the following publication:

Daily Record - Canon City, Colorado

Request for public comments will be accepted for 30 days from the date of publication.

Authorization to inject is issued for ten (10) years from the effective date of the Final Permit (40 CFR § 144.36) unless the permit is terminated (per Part III, Section B of the permit). In the event primary enforcement authority (primacy) for this program is delegated to the State of Colorado, this permit may be modified, reissued or terminated by the State. In the absence of such modification, reissuance, or termination, all requirements of this permit remain in full force and effect. Should this program be so delegated, the EPA UIC Director will notify the permittee of the name and address of the State UIC Program Director, and the date that primacy is effective. The permit may also be terminated for reasonable cause (40 CFR§144.39, 144.40 and 144.41).

This Statement of Basis gives the site-specific permit conditions and reasons for them. The general permit conditions, for which the content is mandatory and not subject to site-specific differences (based on 40 CFR § 144, 146 and 147), are not included in the discussion.

## **II. REASON FOR THE PERMIT**

The UIC Program, created under the authority of the Safe Drinking Water Act (SDWA), is a preventive program tasked with protecting underground sources of drinking water (USDWs). Shallow disposal systems that discharge certain types of fluids into the subsurface are known as Class V wells. These disposal systems consist of subsurface fluid distribution systems defined as an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground (40 CFR § 144.3). Class V wells with waste streams containing constituents with Primary Drinking Water Standard or Health Advisories that have the potential to contaminate or degrade groundwater are required to operate under a permit. Permit requirements generally include monitoring the concentrations of contaminants of concern in waste fluids being released into the subsurface. The permit may also include Best Management Practices (BMP) designed to restrict or minimize the volume of contaminants released into the subsurface.

In order to demonstrate compliance with permit limits, analytical results of fluid samples must verify that all the analyzed constituent concentrations do not exceed the values established by



permit limits. The permit limits have been established using Primary Drinking Water Standards called MCLs for drinking water, Region 8 limits, or Health Advisories to prevent contamination of underground sources of drinking water. These constituents are included in Tables 1 and 2 of the permit.

#### Best Management Practices (BMPs)

Kwik Stop will use best management practices, as defined in Part II, Section D.5 of the permit, for the disposal of truck wash waste fluids into the Class V shallow disposal system. Waste fluids shall be collected and analyzed semi-annually at six-month intervals. If the analyses show that any constituent being analyzed does not meet drinking water standards as established by the EPA, Kwik Stop will be required to notify the EPA within 24 hours of the receipt of the analysis. To reduce possible contamination of the waste water, all accidental spills of fluids associated with truck repairs must be absorbed with an absorbent material and disposed of as a solid waste per the requirements of the Resource Conservation and Recovery Act (RCRA). To assure that only fluids are discharged into the leach field come from car and truck washing, any sediment that may accumulate in the floor drain sumps and settling tank will be periodically removed and properly disposed of off site. The permittee will continue to inspect the tanks twice per year and pump them once per year. These "**best management practices**" will significantly reduce the potential for contaminants migrating into the ground water.

### **III. SAMPLING AND REPORTING OF RESULTS**

#### Shallow Injection Well Sampling Program

The permittee is required to collect fluid samples semi-annually from the waste stream before it is discharged into the leach field. The list of constituents to be analyzed is found in the Total Metals and Volatile Organic Compounds tables in the permit. The sampling techniques utilized must be adequate to provide a representative sample of waste water constituents and to allow the fluid sample to be analyzed using the EPA analytical methods approved for under the drinking water program or an analytical method proven to be equivalent. These constituents were selected for analysis based on their potential for endangering the USDW. The analyzing laboratory will provide a written report of all the results and laboratory documentation of quality control procedures. The first sample will be collected within 30 days of the effective date of the final permit.

#### Reporting of Results

The report of analytical results from first sample collected will be sent to the Director no later than one (1) week after the permittee has received the analytical results from the laboratory. Subsequent reports due no later than January 1 and July 1 of each year.

## Water Quality of Waste Fluids

Kwik Stop collected two waste fluid samples from the Class V shallow disposal system that were analyzed for Total Metals and Volatile Organic Compounds (VOCs). The first sample was analyzed on August 14, 2001, by Stewart Environmental Consultants, Fort Collins, Colorado. The second sample was analyzed on February 16, 2011, by Environmental Alternatives, Inc. of Canon City, Colorado. The concentrations of detectible constituents from the 2011 analysis with permit limits are shown in Tables 1 and 2 below. These results met permit limits.

Table 1: Total Metals

Parameter Name	Standard Type*	Permit Limit (mg/L)	Measured Concentration 2/16/2011 (mg/L)
Antimony	MCL	.006	Not Detected
Arsenic	MCL	0.01	Not Detected
Barium	MCL	2.0	0.13
Beryllium	MCL	0.004	Not Detected
Boron	HA-Lifetime	1.4	0.11
Cadmium	MCL	0.005	Not Detected
Chromium(total)	MCL	0.1	Not Detected
Copper	MCL-TT	1.3	0.015
Iron	Region 8 Permit Limit	5.0	3.30
Lead	MCL-TT	0.015	0.012
Manganese	Region 8 Permit Limit	0.8	0.32
Mercury(inorganic)	MCL	0.002	0.0002
Molybdenum	HA-Lifetime	0.04	0.011
Nickel	HA-Lifetime	0.1	0.022
Selenium	MCL	0.05	Not Detected
Silver	HA-Lifetime	0.1	Not Detected
Strontium	HA-Lifetime	4.0	0.55
Thallium	MCL	0.002	Not Detected
Zinc	HA-Lifetime	2.0	0.18

Metals highlighted in above table are those required for analysis under this permit. Metals that are not highlighted are included in list for reference to permit limit and are not required for analysis.

Table 2: Volatile Organic Compounds

Parameter Name	CAS No	Permit Limit (mg/L)	Measured Concentration 2/16/2011 (mg/L)
1,1,1,2-Tetrachloroethane	630-20-6	0.07	Not Detected
1,1,1-Trichloroethane	71-55-6	0.2	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.0003	Not Detected
1,1,2-Trichloroethane	79-00-5	0.005	Not Detected
1,1-Dichloroethylene	75-35-4	0.007	Not Detected
1,2-(cis)Dichloroethylene	156-59-2	0.07	Not Detected
1,2-(trans)Dichloroethylene	156-60-5	0.1	Not Detected
1,2,3-Trichloropropane	96-18-4	0.04	Not Detected
1,2,4-Trichlorobenzene	120-82-1	0.07	Not Detected
1,2-Dibromomethane (Ethylene Dibromide [EDB])	106-93-4	0.00005	Not Detected
1,2-Dichlorobenzene o-	95-50-1	0.6	Not Detected
1,2-Dichloroethane	107-06-2	0.005	Not Detected
1,2-Dichloropropane	78-87-5	0.005	Not Detected
1,3-Dichlorobenzene m-	541-73-1	0.6	Not Detected
1,4-Dichlorobenzene p-	106-46-7	0.075	Not Detected
2-Butanone (methyl ethyl ketone)	78-93-3	4.0	
2-Chlorotoluene (o-)	95-49-8	0.1	Not Detected
4-Chlorotoluene (p-)	106-43-4	0.1	Not Detected
Acetone	67-64-1	7.0	
Acrylonitrile	107-13-1	0.006 <sup>1</sup>	
Benzene	71-43-2	0.005	0.00024
Bromobenzene	108-86-1	4.0	Not Detected
Bromochloromethane	74-97-5	0.09	Not Detected
Bromodichloromethane (THM)	75-27-4	0.08	0.00064
Bromoform (THM)	75-25-2	0.08	Not Detected
Bromomethane	74-83-9	0.01	Not Detected
Carbon tetrachloride	56-23-5	0.005	Not Detected
Chlorobenzene (Monochlorobenzene)	108-90-7	0.1	Not Detected
Chlorodibromomethane (Dibromochloromethane)(THM)	124-48-1	0.08	Not Detected
Chloroform (THM)	67-66-3	0.08	0.0053
Chloromethane	74-87-3	0.03	Not Detected

<sup>1</sup> 10<sup>-4</sup> cancer risk

Parameter Name	CAS No	Permit Limit (mg/L)	Measured Concentration 2/16/2011 (mg/L)
Dibromochloropropane (DBCP)	96-12-8	0.0002	
Dichlorodifluoromethane	75-71-8	1.0	Not Detected
Dichloromethane (Methylene chloride)	75-09-2	0.005	0.00049
Ethylbenzene	100-41-4	7.0	0.00067
Hexachlorobutadiene	87-68-3	0.01	Not Detected
Isopropylbenzene (cumene)	98-82-8	4.0	Not Detected
Naphthalene	91-20-3	0.1	0.0008
Perchloroethylene (PCE) (Tetrachloroethylene)	127-18-4	0.005	0.00033
Styrene	100-42-5	0.1	Not Detected
Toluene	108-88-3	1.0	0.0019
Total Trihalomethanes		0.08	0.00594
Trichloroethylene (TCE)	79-01-6	0.005	Not Detected
Trichlorofluoromethane	75-69-4	2.0	Not Detected
Vinyl chloride	75-01-4	0.002	Not Detected
Xylenes (total)	1330-20-7	10	

	= detection near permit limit
	= permit limited reached
	= permit limit exceeded

Total Trihalomethanes: chloroform, bromoform, bromodichloromethane, dibromochloromethane  
Total Xylenes: o-Xylene, m-Xylene, p-Xylene

#### IV. AREA HYDROLOGY

##### Underground Sources of Drinking Water (USDW)

An Underground Source of Drinking Water is defined by UIC regulations as an aquifer, or a portion thereof, which contains less than 10,000 milligrams per liter total dissolved solids, and which is being used or could be used as a source of drinking water.

There are no water wells within the required 1/4-mile Area of Review. Additionally, there are no surface bodies of water within the required 1/4-mile Area of Review. The nearest non-intermittent water features are Brush Hollow Creek 1.25 miles to the west, the Brush Hollow Reservoir approximately 3 miles northwest, and the Arkansas River 2.0 miles to the south. The elevation at the facility slopes down gently (about 2%) towards the Arkansas River. These observations can be seen in Figure 5 of the Appendix.

## **APPENDIX**



**Figure 1:** The Penrose Kwik Stop facility is approximately 35 miles southwest of Colorado Springs on Highway 115.



**Figure 2:** The facility is comprised of a six-bay carwash station, a convenience store, an office and warehouse building, and two fueling stations.





Figure 3: Layout of the disposal system.

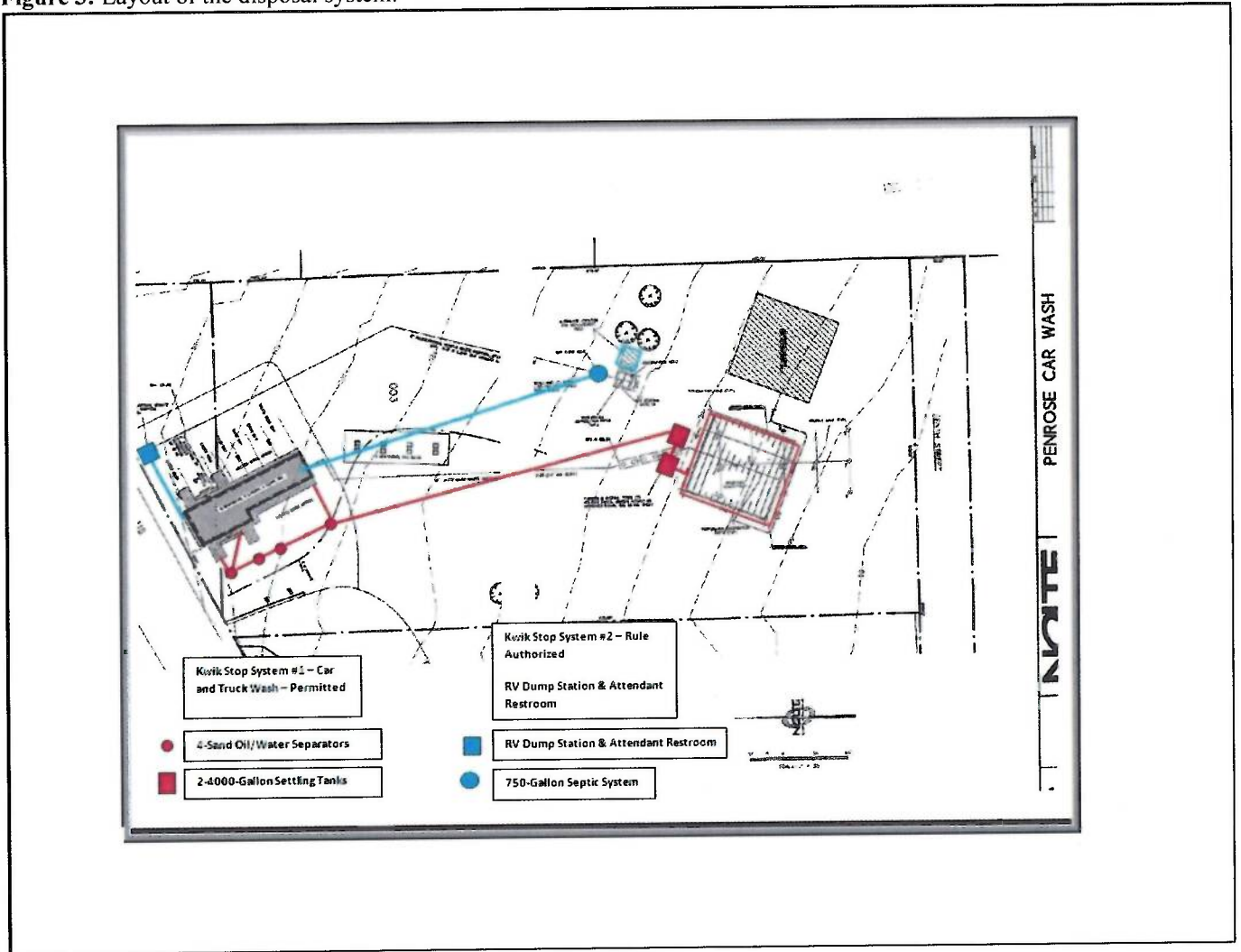


Figure 4: Components of the system.

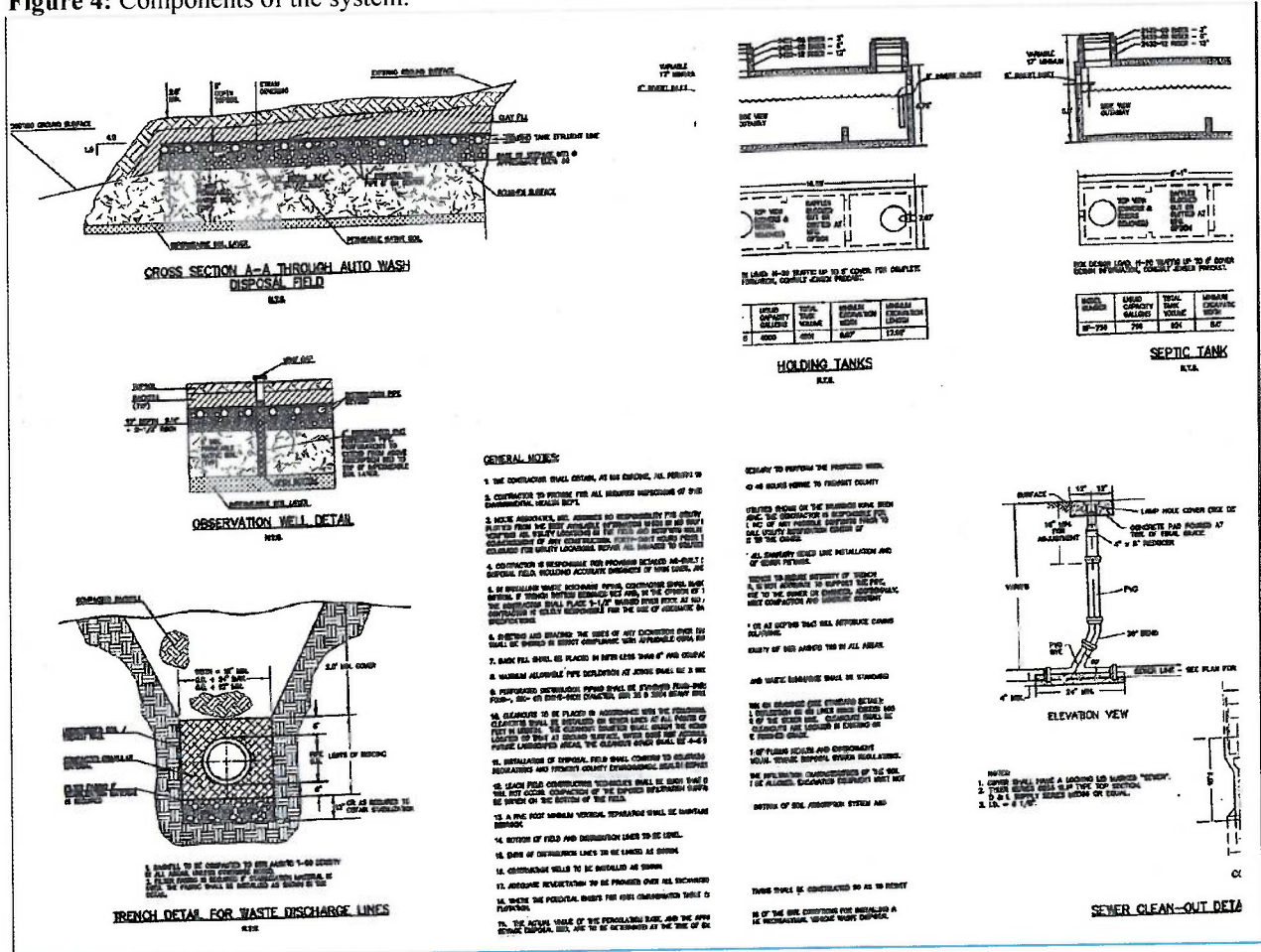


Figure 5: ¼-mile Area of Review.

